- Search History will be lost after eight hours of inactivity.
- To combine searches use # before search number, e.g., #2 AND #6.
- Search numbers may not be continuous; all searches are represented.
- Click on query # to add to strategy

Search	Most Recent Queries	Time	Result
#20	Search **prepro ghrelin**	13:43:07	8
#19	Search **prepro ghrelin and receptor**	13:42:51	4
#18	Search **pepro ghrelin and receptor**	13:42:49	0
#17	Search **pepro ghrelin**	13:42:41	0
#16	Search **Sheppard P and pepro ghrelin**	13:42:33	0
#15	Search **Sheppard P and ghrelin**	13:42:05	0
#14	Search **Sheppard P and GHS recepter**	13:41:36	0
#13	Search **Sheppard P and GHS-R**	13:41:24	0
#12	Search **Sheppard P and GHS-R** Limits: **Entrez Date to 1999/11/22**	13:41:21	0
#11	Search **Sheppard P and zsig33 and GHS** Limits: **Entrez Date to 1999/11/22**	13:41:08	0
#5	Search **Sheppard P and zsig33 and GHS receptor** Limits: **Entrez Date to 1999/11/22**	13:40:28	0
#7	Search **Sheppard P and zsig33 and receptor** Limits: **Entrez Date to 1999/11/22**	13:38:32	13
#3	Search **Sheppard P and zsig33** Limits: **Entrez Date to 1999/11/22**	13:38:26	98
#6	Search **Sheppard P and GHS receptor** Limits: **Entrez Date to 1999/11/22**	13:37:30	0
#4	Search **Sheppard P and zsig33 and GHS-R** Limits: **Entrez Date to 1999/11/22**	13:37:08	0
#2	Search **Sheppard P and zsig33**	13:36:31	120
#1	Search **Sheppard P**	13:36:18	120

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=> "GHS-R"
           981 "GHS"
       1220331 "R"
L1          491 "GHS-R"
                  ("GHS"(W)"R")

=> zsig33
L2            5 ZSIG33

=> L1 and l2
L3            2 L1 AND L2

=> ghrelin
          1730 GHRELIN
            16 GHRELINS
L4          1730 GHRELIN
                  (GHRELIN OR GHRELINS)

=> L1 and L4
L5          359 L1 AND L4

=> "binding motif"
         920025 "BINDING"
           2004 "BINDINGS"
         920596 "BINDING"
                  ("BINDING" OR "BINDINGS")
          48648 "MOTIF"
          93990 "MOTIFS"
         122801 "MOTIF"
                  ("MOTIF" OR "MOTIFS")
L6         8050 "BINDING MOTIF"
                  ("BINDING"(W)"MOTIF")

=> L6 and L5
L7            0 L6 AND L5

=> GSSFLSPEHORVOOR
              0 GSSFLSPEHORVOOR
L8            0 GSSFLSPEHORVOOR

=> human
        1590875 HUMAN
         336008 HUMANS
L9      1756575 HUMAN
                  (HUMAN OR HUMANS)

=> L9 and L4
L10         987 L9 AND L4

=> L10 and L1
L11         193 L10 AND L1

=> L11 and L2
L12           0 L11 AND L2

=> D L2 IBIB ABS 1-5

L2   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2004:333834  CAPLUS
DOCUMENT NUMBER:          140:355850
TITLE:                    Antagonistic anti-zsig33 peptide antibodies
                          for reducing body weight, appetite and growth hormone
                          secretion
INVENTOR(S):              Jaspers, Stephen R.; Sheppard, Paul O.; Bishop, Paul
                          D.; Kuijper, Joseph L.; Deisher, Theresa A.
PATENT ASSIGNEE(S):       Zymogenetics, Inc., USA
SOURCE:                   PCT Int. Appl., 100 pp.
                          CODEN: PIXXD2
```

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004033645	A2	20040422	WO 2003-US31804	20031006
WO 2004033645	A3	20040805		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2500665	AA	20040422	CA 2003-2500665	20031006
AU 2003282755	A1	20040504	AU 2003-282755	20031006
US 2004208866	A1	20041021	US 2003-679813	20031006
EP 1556084	A2	20050727	EP 2003-774639	20031006
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006502227	T2	20060119	JP 2004-543491	20031006

PRIORITY APPLN. INFO.: US 2002-416918P P 20021007
WO 2003-US31804 W 20031006

AB The present invention relates to a method of regulating body weight, body mass, fat depositions, and circulating glucose levels, by antagonizing **zsig33** peptide by binding it with an antibody. The antagonistic antibody may also useful for inhibiting appetite, satiety and growth hormone secretion from pituitary cells, and for treating metabolic disorder such as glucose metabolism, obesity as well as neuropathy-associated gastrointestinal disorders in human and mammal.

L2 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:354027 CAPLUS
DOCUMENT NUMBER: 136:364975
TITLE: Sequences of **zsig33**-like peptides and therapeutic uses in gastrointestinal tract disorders
INVENTOR(S): Jaspers, Stephen R.; Sheppard, Paul O.; Deisher, Theresa A.; Bishop, Paul D.
PATENT ASSIGNEE(S): Zymogenetics, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 34 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002055156	A1	20020509	US 2001-853253	20010510
US 6897286	B2	20050524		
US 2005048618	A1	20050303	US 2004-921371	20040819

PRIORITY APPLN. INFO.: US 2000-203300P P 20000511
US 2001-853253 A3 20010510

AB The present invention relates to **zsig33**-like peptides, which are produced by peptide cleavage from the C terminal peptide of **zsig33** , and its agonists, antagonists, and antibodies. Methods of modulating gastric contractility, nutrient uptake, growth hormones, the secretion of digestive enzymes and hormones, and/or secretion of enzymes and/or hormones in the pancreas are also included.
REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:851201 CAPLUS

DOCUMENT NUMBER: 136:1671
TITLE: Sequences of novel human secretory protein **zsig33**-like peptides
INVENTOR(S): Jaspers, Stephen R.; Sheppard, Paul O.; Deisher, Theresa A.; Bishop, Paul D.
PATENT ASSIGNEE(S): Zymogenetics, Inc., USA
SOURCE: PCT Int. Appl., 89 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001087933	A2	20011122	WO 2001-US15091	20010510
WO 2001087933	A3	20020711		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1278852	A2	20030129	EP 2001-937280	20010510
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-569271 A 20000511
WO 2001-US15091 W 20010510

AB The present invention provides sequences for **zsig33**-like peptides which are produced by peptide cleavage from the C terminal peptide of human secretory protein **zsig33**. Methods of modulating gastric contractility, nutrient uptake, growth hormones, the secretion of digestive enzymes and hormones, and/or secretion of enzymes and/or hormones in the pancreas are also included.

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:396891 CAPLUS
DOCUMENT NUMBER: 135:14332
TITLE: Method of forming a peptide-receptor complex with protein **zsig33** and growth hormone secretagogue receptor (GHS-R)
INVENTOR(S): Sheppard, Paul O.; Jaspers, Stephen R.; Deisher, Theresa A.; Bishop, Paul D.
PATENT ASSIGNEE(S): Zymogenetics, Inc., USA
SOURCE: PCT Int. Appl., 111 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001038355	A2	20010531	WO 2000-US32074	20001122
WO 2001038355	A3	20011122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2392019	AA	20010531	CA 2000-2392019	20001122
EP 1232175	A2	20020821	EP 2000-982197	20001122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2003514917	T2	20030422	JP 2001-540118	20001122
PRIORITY APPLN. INFO.:			US 1999-166765P	P 19991122
			WO 2000-US32074	W 20001122

AB The present invention relates to a method of forming a peptide-receptor complex with **zsig33** polypeptides and growth hormone secretagogue receptor (GHS-R). The discovery of this novel method of forming a peptide-receptor complex is important for further elucidation of the how the body maintains its nutritional homeostasis and development of therapeutics to intervene in those processes, as well as other uses that will be apparent from the teachings herein. The present invention is based upon the identification of a previously described secreted protein known as **zsig33** as the peptide ligand for an orphan receptor known as GHS-R, which belongs to G protein-coupled receptor family. The **zsig33** ligand has homol. to motilin and has been found to be transcribed in the gastrointestinal system. The orphan receptor has homol. to the motilin receptor, GPR38. Anal. of the tissue distribution of the mRNA corresponding to **zsig33** protein showed that expression was highest in stomach, followed by apparent but decreased expression levels in small intestine and pancreas. The partial sequence for the secreted **zsig33** protein was derived from a pancreatic library, and has also been shown in lung cDNA libraries. In vitro binding studies have shown that the **zsig33** peptide binds to kidney, duodenum, and jejunum. Thus, binding of the **zsig33** ligand to the GHS-R is expected in tissues such as stomach, small intestine, pancreas, lung, kidney, duodenum, jejunum, and brain. Methods of modulating gastric contractility, nutrient uptake, growth hormones, the secretion of digestive enzymes and hormones, and/or secretion of enzymes and/or hormones in the pancreas are also included.

L2 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	1998:672664 CAPLUS
DOCUMENT NUMBER:	129:271092
TITLE:	Cloning and cDNA sequence of a human motilin homolog and its role in gastric motility
INVENTOR(S):	Sheppard, Paul O.; Deisher, Theresa A.
PATENT ASSIGNEE(S):	Zymogenetics, Inc., USA
SOURCE:	PCT Int. Appl., 69 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9842840	A1	19981001	WO 1998-US5620	19980323
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6380158	B1	20020430	US 1997-822897	19970324
CA 2284733	AA	19981001	CA 1998-2284733	19980323
AU 9865769	A1	19981020	AU 1998-65769	19980323
AU 726423	B2	20001109		
EP 975760	A1	20000202	EP 1998-911928	19980323
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9808059	A	20000308	BR 1998-8059	19980323
NZ 337958	A	20010330	NZ 1998-337958	19980323
JP 2001513651	T2	20010904	JP 1998-543276	19980323
CN 1733918	A	20060215	CN 2004-10056797	19980323
NO 9904614	A	19991123	NO 1999-4614	19990923
MX 9908778	A	20000228	MX 1999-8778	19990924
US 2005106146	A1	20050519	US 2004-927484	20040825
PRIORITY APPLN. INFO.:			US 1997-41102P	P 19970324

	US 1997-822897	A 19970324
	CN 1998-804682	A3 19980323
	US 1998-46479	A3 19980323
	WO 1998-US5620	W 19980323
	US 2001-794987	A1 20010227

AB The present invention is directed to polynucleotides, polypeptides and peptide fragments thereof, and uses thereof for a novel human fetal pancreatic cDNA sequence, designated **zsig33**, which has homol. to motilin. **Zsig33** is secreted as mature peptide comprising residues 24-41 of the prepro, 117-residue precursor. Tissue distribution of the mRNA for the novel polypeptide is specific to the stomach, small intestine and pancreas. The **zsig33** gene was mapped to chromosome 3p26.1. The present invention further includes agonists, antagonists, antibodies, host cells expressing the cDNA encoding the novel motilin homologs and methods for increasing gastric motility using the novel mols.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> dL3 IBIB ABS 1-2
            40 DL3
            15 IBIB
        226943 ABS
       8661096 1
       8731899 2
L13           0 DL3 IBIB ABS 1-2
                (DL3(W)IBIB(W)ABS(W)1(W)2)

=> D L3 IBIB ABS 1-2
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L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2004:333834 CAPLUS
DOCUMENT NUMBER:	140:355850
TITLE:	Antagonistic anti-**zsig33** peptide antibodies for reducing body weight, appetite and growth hormone secretion
INVENTOR(S):	Jaspers, Stephen R.; Sheppard, Paul O.; Bishop, Paul D.; Kuijper, Joseph L.; Deisher, Theresa A.
PATENT ASSIGNEE(S):	Zymogenetics, Inc., USA
SOURCE:	PCT Int. Appl., 100 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004033645	A2	20040422	WO 2003-US31804	20031006
WO 2004033645	A3	20040805		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2500665	AA	20040422	CA 2003-2500665	20031006
AU 2003282755	A1	20040504	AU 2003-282755	20031006
US 2004208866	A1	20041021	US 2003-679813	20031006
EP 1556084	A2	20050727	EP 2003-774639	20031006
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006502227	T2	20060119	JP 2004-543491	20031006
PRIORITY APPLN. INFO.:			US 2002-416918P	P 20021007

WO 2003-US31804 W 20031006

AB The present invention relates to a method of regulating body weight, body mass, fat depositions, and circulating glucose levels, by antagonizing **zsig33** peptide by binding it with an antibody. The antagonistic antibody may also useful for inhibiting appetite, satiety and growth hormone secretion from pituitary cells, and for treating metabolic disorder such as glucose metabolism, obesity as well as neuropathy-associated gastrointestinal disorders in human and mammal.

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:396891 CAPLUS
DOCUMENT NUMBER: 135:14332
TITLE: Method of forming a peptide-receptor complex with protein **zsig33** and growth hormone secretagogue receptor (**GHS-R**)
INVENTOR(S): Sheppard, Paul O.; Jaspers, Stephen R.; Deisher, Theresa A.; Bishop, Paul D.
PATENT ASSIGNEE(S): Zymogenetics, Inc., USA
SOURCE: PCT Int. Appl., 111 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001038355	A2	20010531	WO 2000-US32074	20001122
WO 2001038355	A3	20011122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2392019	AA	20010531	CA 2000-2392019	20001122
EP 1232175	A2	20020821	EP 2000-982197	20001122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003514917	T2	20030422	JP 2001-540118	20001122

PRIORITY APPLN. INFO.: US 1999-166765P P 19991122
WO 2000-US32074 W 20001122

AB The present invention relates to a method of forming a peptide-receptor complex with **zsig33** polypeptides and growth hormone secretagogue receptor (**GHS-R**). The discovery of this novel method of forming a peptide-receptor complex is important for further elucidation of the how the body maintains its nutritional homeostasis and development of therapeutics to intervene in those processes, as well as other uses that will be apparent from the teachings herein. The present invention is based upon the identification of a previously described secreted protein known as **zsig33** as the peptide ligand for an orphan receptor known as **GHS-R**, which belongs to G protein-coupled receptor family. The **zsig33** ligand has homol. to motilin and has been found to be transcribed in the gastrointestinal system. The orphan receptor has homol. to the motilin receptor, GPR38. Anal. of the tissue distribution of the mRNA corresponding to **zsig33** protein showed that expression was highest in stomach, followed by apparent but decreased expression levels in small intestine and pancreas. The partial sequence for the secreted **zsig33** protein was derived from a pancreatic library, and has also been shown in lung cDNA libraries. In vitro binding studies have shown that the **zsig33** peptide binds to kidney, duodenum, and jejunum. Thus, binding of the **zsig33** ligand to the **GHS-R** is expected in tissues such as stomach, small intestine, pancreas, lung, kidney, duodenum, jejunum, and brain. Methods of modulating gastric contractility, nutrient uptake, growth hormones, the secretion of digestive enzymes and hormones, and/or secretion of enzymes and/or hormones in the pancreas are also included.